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EXAMINER

WOZNIAK, JAMES S

ART UNIT PAPER NUMBER

2655

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/019,766	Applicant(s) DRENTH ET AL.	
	Examiner James S. Wozniak	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Adjusted Speech Recognition Based on Coding Mode, Silence Descriptor, and Bad Frame Indicator Control Parameters."

Claim Objections

1. **Claims 1-5** are objected to because of the following informalities:

With respect to **Claim 1**, the control parameter acronyms (CM, SID, BFI) should also be listed in unabbreviated form (i.e., coding mode, silence descriptor, bad frame indicator) in order to clarify the acronym meanings in the claims.

Appropriate correction is required.

2. **Claim 5** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

With respect to **Claim 5**, the examiner notes that it is unclear whether this claim is intended to be an independent or dependent claim as it is currently written. The claim should be

rewritten in an appropriate format in order to clearly identify the dependency of the claim in the case of a dependent claim or include all of the limitations of claim 1 in the case of an independent claim. For the purpose of furthering prosecution, the examiner has interpreted claim 5 to be independent from claim 1.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claim 3** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, claim 3 refers to a silence descriptor (SID) that is related to a speech/noise ratio and is used to adjust a speech recognition means to a speech/noise ratio of an input speech signal, however the specification does not disclose the calculation of a speech/noise ratio in SID determination. Although the specification recites a voice activity detector that determines whether a frame is comprised of speech or noise and generates a speech flag indicative of such a determination to derive a SID parameter (*specification Pages 3-5*), it is not disclosed how such a voice activity decision is made (i.e., through the use of a speech/noise ratio), that an SID contains speech/noise ratio information, or that a speech recognizer is adjusted according to a calculated speech/noise ratio

of an input speech signal. Thus, since the silence descriptor (SID) that is related to a speech/noise ratio and is used to adjust a speech recognition means to a speech/noise ratio of an input speech signal is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, claim 3 fails to comply with the enablement requirement.

5. **Claim 5** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically claim 5 refers to multiple control parameters (CM, SID, BFI) each of which are offered by a first terminal, however the specification does not disclose that a first terminal offers a BFI or “bad frame indicator”. Although the SID and CM parameters are offered from a first terminal, the BFI is determined at a second terminal with regard to the presence of a transmission error resulting from transmission from a first terminal to a second terminal (specification, pages 4-5). Since the BFI is determined at a second terminal, not all of the control parameters disclosed in claim 5 are offered by a first terminal. Therefore, the specification does not describe how a BFI parameter may be offered from a first terminal and claim 5 fails to comply with the enablement requirement.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-2 and 4-5** are rejected under 35 U.S.C. 102(b) as being anticipated by Mony (*U.S. Patent: 6,009,383*).

With respect to **Claim 1**, Mony discloses:

A speech processing system comprising:

Speech recognition means for processing a signal entered from a source to a speech input (*speech input from a mobile transmitter terminal having a speech codec, Fig. 1, Element 5; and speech recognizer, Col. 9, Lines 5-21; Fig. 6, Element 61*), characterized by means for affecting the operation of the speech recognition means by one or more control parameters (CM, SID, BFI) entered by way of a control input, each control parameter relating to a specific characteristic of the signal entered from the source to the speech recognition means (*flag generator, Col. 5, Lines 56-63; Fig. 5, Element 112; and adapted speech recognition that is based upon a bad frame flag (indicator), Col. 8, Lines 39-49*).

With respect to **Claim 2**, Mony discloses:

BFI relates to the reliability or correctness of the signal entered and that the operation of the speech recognition means is adjusted to the reliability or correctness, as the case may be, indicated by the first control parameter of the signal entered (*risk factor based on a bad frame flag, Col. 8, Lines 1-49*).

With respect to **Claim 4**, Mony recites:

A third control parameter relates to the speech encoding mode in the speech encoding means, the operation of the speech recognition means being adjusted to the speech encoding

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mode indicated by the third control parameter (*coding mode identification handshake before a speech recognizer is operated, Col. 5, Line 64- Col. 6, Line 37; and Col. 8, Line 60- Col. 9, Line 7).*

With respect to **Claim 5**, Mony discloses:

A Telecommunication system comprising:

A first terminal having speech and channel encoding means (*Fig. 5, Element, 11*);

A transmission medium (*RF transmission medium, Fig. 5*);

A second terminal having channel and speech decoding means (*Fig. 5, Elements 14 and 18*); and

A speech processing system according to claim 1 (*see the speech processing system taught by Mony and applied above to claim 1*), the signal being offered from the first terminal by way of the transmission medium to the speech input of the speech recognizer of the second terminal (*transmission to a VSN of a second terminal having a speech recognizer, Col. 7, Lines 27-38; Col. 8, Line 60- Col. 9, Line 20*) and each control parameter being offered by the first terminal, by way of the transmission medium, to the control input intended for that purpose of the speech processing system of the second terminal (*coding mode ID provided by a first terminal, Col. 5, Line 64- Col. 6, Line 37; and Col. 8, Line 60- Col. 9, Line 7*).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Mony in view of Power et al (*U.S. Patent: 5,848,388*).

With respect to **Claim 3**, Mony teaches the distributed speech recognition system utilizing a bad frame indicator and coding mode identification as applied to claims 1 and 3. Mony also teaches an adjusted processing of indicated muted or silent frames at a speech recognizer by reducing the importance of such frames (*Col. 8, Lines 21-29*). Mony does not teach that such a silence frame indication relates to a speech/noise ratio, however Power discloses a means for detecting a pause (silence) in speech utilizing a SNR measurement and producing an indication of such a pause (*Col. 8, Lines 34-39*).

Mony and Power are analogous art because they are from a similar field of endeavor in speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Mony with the silence detection means taught by Power in order to provide a means for correctly identifying a word ending to further prevent unvoiced speech frames from being wrongly considered as noise (*Power, Col. 8, Lines 40-52*).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Swaminathan et al (*U.S. Patent: 5,596,676*)- teaches the use of a bad frame indicator in speech coding.

Holzrichter (*U.S. Patent: 6,006,175*)- teaches the use of a damaged frame indicator in speech recognition.


Johnson et al (*U.S. Patent: 6,097,772*)- teaches a speech transmission system utilizing a BFI, SID, and a coding mode flag.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
2/10/2006


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